

**DRILL-STEM TEST DATA**

**Well Name:** #1 FOOS A-P TWIN  
**Company :** RITCHIE EXPLORATION  
**Location - Sec:** 31                      **Twp:** 19S                      **Rge:** 21W  
**County:** NESS                      **State:** KS  
**Date:** 08/10/95

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Exploration

DATE 8-10-95

WELL NAME: #1 Foos "A-P" Twin

KB 2274.00 ft

TICKET NO: 7922

DST #1

LOCATION : SEC.31 TWP.19S RGE.12W

GR 2269.00 ft

FORMATION: Fort Scott

INTERVAL : 4295.00 To 4330.00 ft

TD 4330.00 ft

TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	24174	24174	22150			PF Fr. 30 to hr
SI 30	Range(Psi )	3050.0	3050.0	3925.0	0.0	0.0	IS Fr. 30 to hr
SF 30	Clock(hrs)	12HR	12HR.	12HR.			SF Fr. 30 to hr
FS 30	Depth(ft )	4324.0	4324.0	4299.0	0.0	0.0	FS Fr. 30 to hr

	Field	1	2	3	4	
A. Init Hydro	2269.0	2258.0	0.0	0.0	0.0	T STARTED 0500 hr
B. First Flow	44.0	31.0	0.0	0.0	0.0	T ON BOTM 0633 hr
B1. Final Flow	44.0	31.0	0.0	0.0	0.0	T OPEN 0635 hr
C. In Shut-in	986.0	998.0	0.0	0.0	0.0	T PULLED 0835 hr
D. Init Flow	52.0	38.0	0.0	0.0	0.0	T OUT 0945 hr
E. Final Flow	52.0	38.0	0.0	0.0	0.0	
F. Fl Shut-in	875.0	898.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2104.0	2021.0	0.0	0.0	0.0	Tool Wt. 2000.00 lbs
Inside/Outside	0	0				Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 54000.00 lbs
						Initial Str Wt 51000.00 lbs
						Unseated Str Wt 52000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 0.00 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 4279.00 ft

RECOVERY

Tot Fluid 30.00 ft of 0.00 ft in DC and 30.00 ft in DP  
 20.00 ft of gas in pipe  
 0.00 ft of 10% oil 10% water 80% mud  
 0.00 ft of  
 30.00 ft of v/ slightly oil cut mud 3% oil 97% mud  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	47.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	0.00 F
Hole Condition	GOOD
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	NONE
Reversed Out N	
Tool Chased N	
Tester	PAUL SIMPSON
Co. Rep.	Rocky Milford
Contr.	Duke
Rig #	4
Unit #	
Pump T.	

BLOW DESCRIPTION

IF:  
 weak surface blow building to 1 1/4"

ISI-  
 no blow

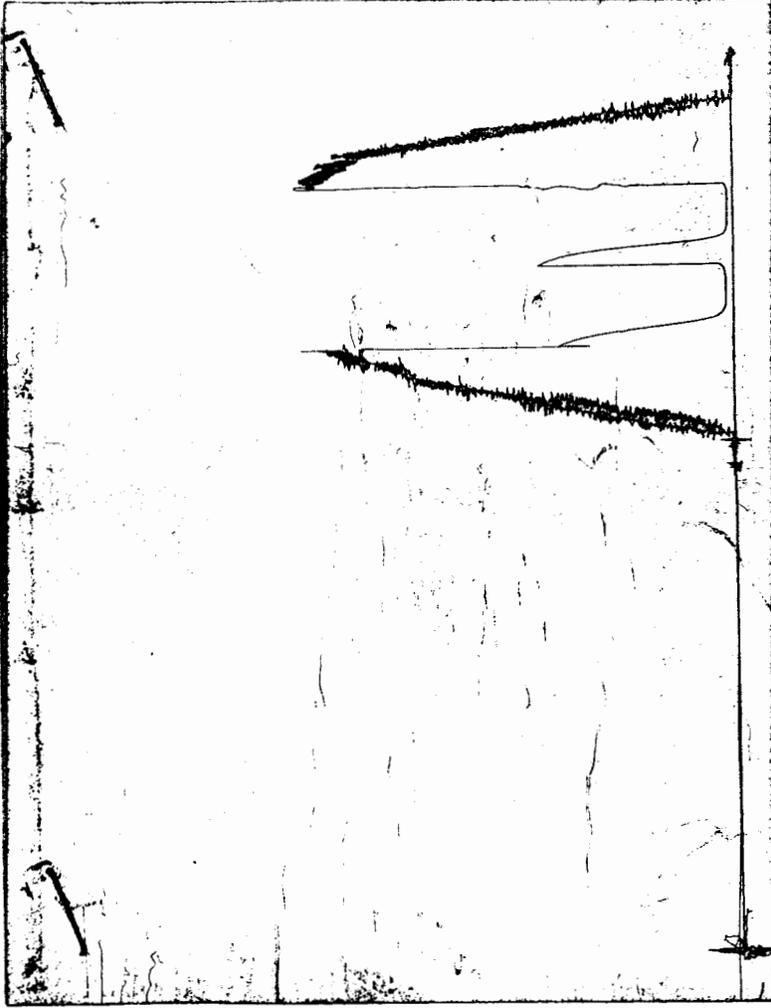
FF:  
 surface blow building to 1 1/2"

FSI-  
 no blow

SAMPLES:  
 SENT TO:

Test Successful: Y

CHART PAGE



This is an actual photograph of recorder chart

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 7922

Well Name & No. <u>Al Foos "A-P" Twin</u>	Test No. <u>1</u>	Date <u>8-10-95</u>
Company <u>Ritchie Exploration</u>	Zone Tested <u>fd Scott</u>	
Address <u>125 N Market A-1000 Wichita Ks 67202</u>	Elevation <u>2265 62 2274 KB</u>	
Co. Rep./Geo. <u>Rocky M Ford</u>	cont. <u>Duke H4</u>	Est. Ft. of Pay _____
Location: Sec. <u>31</u>	Twp. <u>19s</u>	Rge. <u>21w</u>
	Co. <u>Neos</u>	State <u>Ks</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes _____ No _____	Evaluation _____

Interval Tested <u>4295-4330</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>35</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4290</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>4295</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>4330</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.3</u> lb/gal.	Viscosity <u>47</u> Filtrate <u>9.6</u>
Tool Open @ <u>6:30 AM</u>	Initial Blow <u>weak surface blow building to 1 1/4"</u>

Final Blow surface blow building to 1 1/2"

Recovery — Total Feet <u>30</u>	Feet of Gas in Pipe <u>20</u>	Flush Tool? _____
Rec. <u>30</u> Feet Of <u>USOCM</u>	%gas <u>3</u> %oil _____ %water <u>97</u> %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

BHT 104 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud <u>2269</u>	PSI Ak1 Recorder No. <u>22150</u>	Range <u>3925</u>
(B) First Initial Flow Pressure <u>44</u>	PSI @ (depth) <u>4299</u>	w/Clock No. <u>22336</u>
(C) First Final Flow Pressure <u>44</u>	PSI Ak1 Recorder No. <u>24174</u>	Range <u>3050</u>
(D) Initial Shut-In Pressure <u>986</u>	PSI @ (depth) <u>4324</u>	w/Clock No. <u>22348</u>
(E) Second Initial Flow Pressure <u>52</u>	PSI Ak1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>52</u>	PSI @ (depth) _____	w/Clock No. _____
(G) Final Shut-In Pressure <u>895</u>	PSI Initial Opening <u>30</u>	Test _____
(H) Final Hydrostatic Mud <u>2104</u>	PSI Initial Shut-In <u>30</u>	Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow 30 Safety Joint \_\_\_\_\_  
Final Shut-In 30 Straddle \_\_\_\_\_  
Circ. Sub \_\_\_\_\_  
Sampler \_\_\_\_\_  
Extra Packer \_\_\_\_\_  
Other \_\_\_\_\_

Approved By Rocky M Ford  
Our Representative Paul Simpson

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Exploration

DATE 8-13-95

WELL NAME: #1 Foos "A-P" Twin

KB 2274.00 ft

TICKET NO: 7923

DST #2

LOCATION : SEC.31 TWP.19S RGE.12W

GR 2269.00 ft

FORMATION: Miss Osage

INTERVAL : 4412.00 To 4424.00 ft

TD 4445.00 ft

TEST TYPE: CONV STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 20 Rec.	24174	24174	2341alp			PF Fr. 20 to hr
SI 20 Range(Psi )	3050.0	3050.0	4995.0	0.0	0.0	IS Fr. 20 to hr
SF 20 Clock(hrs)	12HR	12HR.	elect			SF Fr. 20 to hr
FS 20 Depth(ft )	4421.0	4421.0	4413.0	0.0	0.0	FS Fr. 20 to hr

	Field	1	2	3	4	
A. Init Hydro	2300.0	2265.0	2295.0	0.0	0.0	T STARTED 0020 hr
B. First Flow	209.0	214.0	218.0	0.0	0.0	T ON BOTM 0151 hr
B1. Final Flow	690.0	687.0	729.0	0.0	0.0	T OPEN 0153 hr
C. In Shut-in	1251.0	1243.0	1255.0	0.0	0.0	T PULLED 0313 hr
D. Init Flow	759.0	754.0	767.0	0.0	0.0	T OUT 0535 hr
E. Final Flow	1024.0	1023.0	1055.0	0.0	0.0	
F. Fl Shut-in	1251.0	1242.0	1255.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2175.0	2127.0	2163.0	0.0	0.0	Tool Wt. 2300.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 64000.00 lbs
						Initial Str Wt 52000.00 lbs
						Unseated Str Wt 64000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 0.00 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 4402.00 ft

RECOVERY

Tot Fluid 2160.00 ft of 0.00 ft in DC and 2160.00 ft in DP  
 160.00 ft of sl oil specked muddy water trace oil 90%  
 0.00 ft of water 10% mud  
 0.00 ft of  
 2000.00 ft of v/ slightly oil specked water  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 SALINITY 18000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	66.00 S/L
W.L.	10.00 in3
F.C.	0.00 in
Mud Drop	

BLOW DESCRIPTION

IF:  
 2" building to bottom of bucket in 1 minute  
 ISI-  
 no blow

FF:  
 strong- bottom of bucket in 1 minute

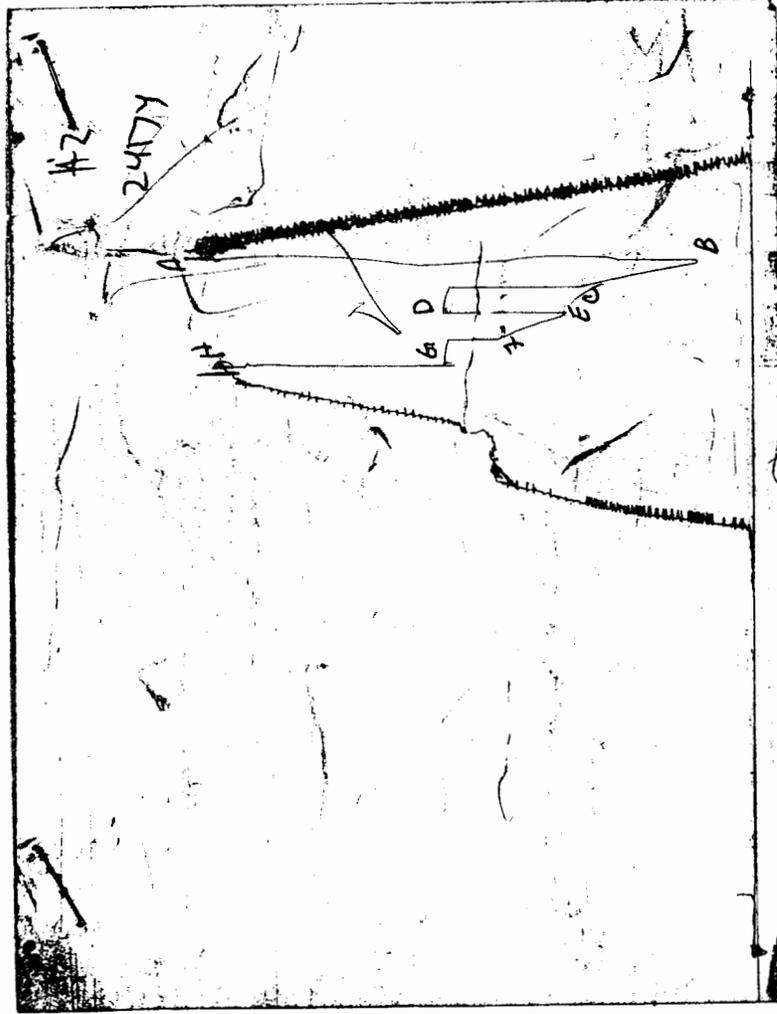
FSI-  
 no blow

SAMPLES:  
 SENT TO:

Amt. of fill	0.00 ft
Btm. H. Temp.	127.00 F
Hole Condition	GOOD
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	3
Cushion Amt.	0.00 N
Cushion Type	NONE
Reversed Out Y	
Tool Chased N	
Tester	PAUL SIMPSON
Co. Rep.	Rocky Milford
Contr.	Duke
Rig #	4
Unit #	
Pump T.	

Test Successful: Y

CHART PAGE



This is an actual photograph of recorder chart

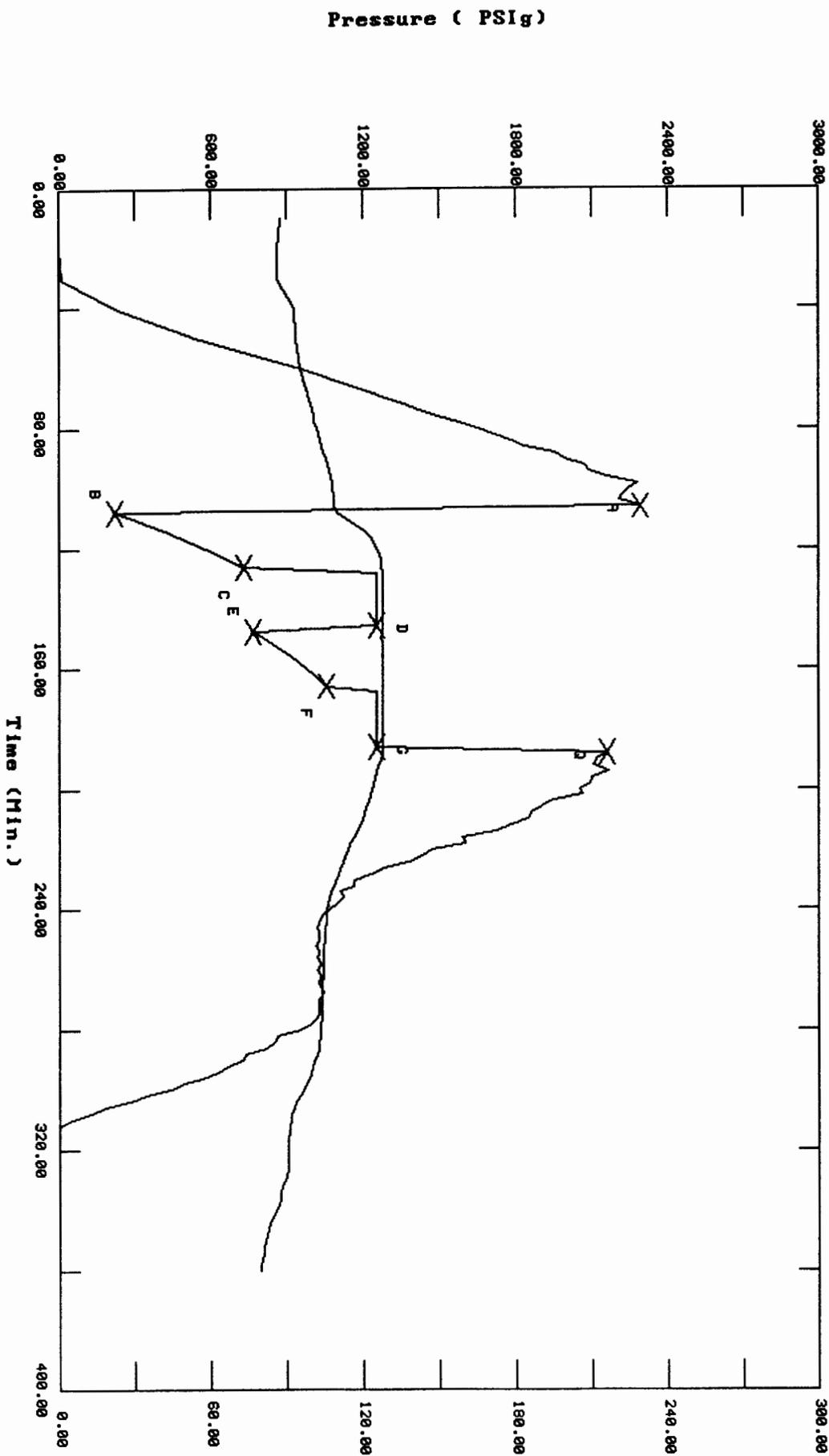


7923 Ritchie Exploration #1 Foss A-P twin DST #2

TEST HISTORY

Flag Points

Flag Points	t(Min.)	P( PSig)
A1	0.00	2295.00
B1	0.00	217.62
C1	18.00	728.07
D1	20.00	1254.88
E1	0.00	786.84
F1	18.00	1055.05
G1	20.00	1254.88
Q1	0.00	2163.32



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7923 Ritchie Exploration #1 Foss A-P twin DST #2

DATE: 08/12/95

TIME: 23:45:38

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	106.00	2295.0	0.0	108.68		
***** Start Flow 1	0.00	217.6	0.0	109.58		
	2.00	290.5	72.8	113.18		
	4.00	354.4	136.8	117.14		
	6.00	415.7	198.1	120.38		
	8.00	473.0	255.4	122.72		
	10.00	528.9	311.3	124.34		
	12.00	583.0	365.3	125.60		
	14.00	634.1	416.4	126.32		
	16.00	682.7	465.0	127.04		
***** End Flow 1	18.00	728.1	510.4	127.40		
***** Start Shutin 1	0.00	728.1	0.0	127.40	0.0000	0.530
	2.00	1251.2	523.1	127.58	10.0000	1.565
	4.00	1252.9	524.9	127.76	5.5000	1.570
	6.00	1253.7	525.6	127.94	4.0000	1.572
	8.00	1254.2	526.1	127.94	3.2500	1.573
	10.00	1254.5	526.4	127.94	2.8000	1.574
	12.00	1254.6	526.6	127.94	2.5000	1.574
	14.00	1254.8	526.7	127.94	2.2857	1.575
	16.00	1254.9	526.8	127.76	2.1250	1.575
	18.00	1254.6	526.6	127.76	2.0000	1.574
***** End Shut-in 1	20.00	1254.9	526.8	127.58	1.9000	1.575
***** Start Flow 2	0.00	766.8	0.0	127.58		
	2.00	807.4	40.5	127.40		
	4.00	846.1	79.2	127.58		
	6.00	882.6	115.7	127.58		
	8.00	916.9	150.1	127.76		
	10.00	949.3	182.5	127.76		
	12.00	979.0	212.2	127.76		
	14.00	1004.7	237.9	127.94		
	16.00	1030.6	263.8	127.76		
***** End Flow 2	18.00	1055.0	288.2	127.94		
***** Start Shutin 2	0.00	1055.0	0.0	127.94	0.0000	1.113
	2.00	1252.4	197.3	127.94	19.0000	1.568
	4.00	1253.5	198.4	127.94	10.0000	1.571
	6.00	1253.6	198.6	127.94	7.0000	1.572
	8.00	1254.0	199.0	127.94	5.5000	1.573
	10.00	1254.3	199.2	127.94	4.6000	1.573
	12.00	1254.5	199.4	127.76	4.0000	1.574
	14.00	1254.5	199.5	127.76	3.5714	1.574
	16.00	1254.6	199.6	127.76	3.2500	1.574
	18.00	1254.7	199.7	127.76	3.0000	1.574
***** End Shut-in 2	20.00	1254.8	199.7	127.58	2.8000	1.575
***** Final Hydro.	188.00	2163.3	0.0	127.58		

Standard recorder 2345  
 started a hole 0020

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Str 52,000  
 64,000  
 71 strds = 4402

## Test Ticket

No 7923

Well Name & No. #1 800' H-P' T with	Test No. 2	Date 8-13-95
Company Ritchie Exploration	Zone Tested Ness	
Address	Elevation 2274 KB	
Co. Rep./Geo. Rocky Milford	Cont. Duke #4	Est. Ft. of Pay
Location: Sec. 31 Twp. 19s Rge. 21w	Co. Ness	State ks
No. of Copies	Distribution Sheet	Yes No Turnkey Yes No Evaluation

Interval Tested 4412-4424	Drill Pipe Size
Anchor Length 12	Top Choke - 1" Bottom Choke - 3/4"
Top Packer Depth 4407	Hole Size - 7 7/8" Rubber Size - 6 3/4"
Bottom Packer Depth 4412	Wt. Pipe I.D. - 2.7 Ft. Run
Total Depth 4445	Drill Collar - 2.25 Ft. Run
Mud Wt. 9.2 lb/gal.	Viscosity 66 Filtrate 10.0
Tool Open @ 1:53 AM	Initial Blow 2" blow building to bottom of bucket in 1 minute
Final Blow	strong - bottom of bucket in 1 minute

Recovery - Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. 160 Feet Of sl oil specked muddy water	% gas % oil % water % mud	
Rec. 2000 Feet Of v sl oil specked water	% gas % oil % water % mud	
Rec. Feet Of (reversed)	% gas % oil % water % mud	
Rec. Feet Of	% gas % oil % water % mud	
Rec. Feet Of	% gas % oil % water % mud	

BHT 127 °F Gravity	°API @	°F Corrected Gravity	°API
RW .36 @ 77 °F	Chlorides 15,000 ppm Recovery	Chlorides 10,000 ppm System	
(A) Initial Hydrostatic Mud 2300	Alone 2295 PSI	AK1 Recorder No. 2341	Range 4995
(B) First Initial Flow Pressure 209	217 PSI	@ (depth) 4413	w/Clock No. Alpine
(C) First Final Flow Pressure 690	728 PSI	AK1 Recorder No. 24179	Range 3050
(D) Initial Shut-in Pressure 1251	1255 PSI	@ (depth) 4421	w/Clock No. 22348
(E) Second Initial Flow Pressure 759	767 PSI	AK1 Recorder No. 10994	Range 4200
(F) Second Final Flow Pressure 1024	1055 PSI	@ (depth) 4441	w/Clock No. 23839
(G) Final Shut-in Pressure 1251	1255 PSI	Initial Opening 20	Test X
(H) Final Hydrostatic Mud 2175	2163 PSI	Initial Shut-in 20	Jars

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Final Flow 20	Safety Joint
Final Shut-in 20	Straddle X
	Circ. Sub X
	Sampler
	Extra Packer X
	Other Alpine N/C

Approved By [Signature]  
 Our Representative [Signature]